



मराठी

10 April 2024

National and International News

### TSAT-1A



#### Context:

- Tata Advanced Systems Ltd (TASL) in Partnership with Satellogic Launches India's First Privately-Built Sub-Metre Resolution Surveillance Satellite.
- TASL, in collaboration with Satellogic, has successfully launched **TSAT-1A**, India's first privately-built sub-metre resolution surveillance satellite. This marks a significant achievement in India's space capabilities.

#### Launch Details:

- TSAT-1A was launched from the **Kennedy Space Center, Florida**, aboard **SpaceX Falcon 9 rocket** on April 7.
- It was assembled at TASL's Vemagal facility in Karnataka.

#### Technical Specifications:

- TSAT-1A offers **high-resolution optical satellite imagery** with multispectral and hyperspectral capabilities.
- It boasts a **sub-metre resolution** (0.5-0.8 meters natively) which can be enhanced to 0.5 to 0.6-meter super resolution using software.
- **Weighing less than 50 kg, it is positioned in low-earth orbit, enabling increased collection capacity and low-latency delivery of satellite images.**

#### Key points:

- TSAT-1A aims to cater primarily to government agencies, including the Indian armed forces, with plans to extend services to commercial clients.
- Its inclined orbit allows for frequent revisits to areas of interest, enhancing surveillance capabilities.
- TASL aims to expand its capabilities in the space sector by focusing on assembly, integration, and testing of satellites, data processing, and satellite control centers.
- **Collaboration with ISRO for future launches is also envisioned.**



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Right against adverse effect of climate change part of right to life, equality

**Context:**

- The Supreme Court has broadened the scope of **Articles 14 and 21 to encompass the "right against the adverse effects of climate change."**

**Background of the Case:**

- A plea was filed to protect the **Great Indian Bustard (GIB) from habitat loss due to power transmission lines.**
- On April 19, 2021, the **Supreme Court ordered restrictions on overhead transmission lines and suggested their conversion to underground lines.**
- Ministries of Environment, Forests, Power, and New and Renewable Energy sought modifications citing international commitments on renewable energy and technical challenges.

**Court's Decision:**

- Acknowledged practical difficulties in implementing the order due to technical challenges, land acquisition, and costs.
- Emphasized the **importance of renewable energy**, particularly solar power, and the need to balance GIB conservation with overall environmental preservation.

**Formation of Expert Committee:**

- Established a **nine-member committee to assess the feasibility of undergrounding power lines** in specific areas, considering factors like terrain, population density, and infrastructure.
- The committee was instructed to submit a **report by July 31, 2024, through the Union Government.**

**Lack of Specific Legislation:**

- Despite various governmental policies recognizing climate change, there's no comprehensive legislation in India addressing it.
- People still have a right against the adverse effects of climate change.

**Impact on Right to Life and Health:**

- **A clean environment is crucial for fully realizing the right to life.**
- **Climate change affects health** through factors like air pollution, diseases, droughts, and food shortages.
- Inability to cope with climate change violates both the right to life and the right to equality for underserved communities.

**Ruling by the Supreme Court:**

- Expanded the scope of Articles 14 and 21 to include the "right against the adverse effects of climate change."



### Constitutional Provisions:

- **Article 48A** emphasizes the State's responsibility to protect and improve the environment.
- **Article 51A(g)** mandates citizens to protect and improve the natural environment.
- While not directly enforceable, these provisions indicate the Constitution's recognition of the importance of the natural world.

### Interpretation of Articles 14 and 21:

- Article 21 recognizes the right to life and personal liberty.
- Article 14 ensures equality before the law.
- **These articles are seen as sources of the right to a clean environment and protection against climate change effects.**

### ANTI DUMPING

#### Context:

- The **Directorate General of Trade Remedies (DGTR)** has recommended imposing anti-dumping duty on **sodium cyanide (NaCN) imports from China, the European Union, Japan, and Korea.**

#### Key points:

- Anti-dumping duty is **imposed on imported goods when they are sold at a lower price than their normal value**, causing injury to producers of competing products in the importing country.
- The purpose of this duty is to **rectify the trade distortions caused by dumping and to re-establish fair trade.**

#### DGTR:

- The DGTR is an **Indian government organization that handles trade issues**, including unfair trade practices and subsidies that harm Indian businesses.
- It was formed in **2018** by merging several trade-related directorates.
- The DGTR operates under the **Department of Commerce, Ministry of Commerce & Industry**, and is responsible for dealing with anti-dumping and countervailing duty (CVD) cases, safeguard measures, and providing trade defense support to domestic industries and exporters.

#### NaCN:

- Sodium cyanide (NaCN) is a **toxic compound used in various industries.**
- It is a **white, water-soluble solid with a high affinity for metals, making it highly toxic.**
- Its main application is in **gold mining, where its reactivity toward metals is exploited.**



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### Glycaemic Index

#### Context:

- A recent international study suggests that adhering to **diets with a low glycaemic index (GI) and low glycaemic load (GL)** may help prevent the onset of type 2 diabetes.

#### About:

##### Glycaemic Index (GI):

- GI ranks **carbohydrate-containing foods** based on their post-meal blood glucose response.
- Foods are ranked on a **scale of 0 to 100**, with pure glucose having a value of 100.
- The lower a **food's GI**, the **slower it raises blood sugar levels**.
- Foods high in fiber or fat typically have a lower GI, while processed foods tend to have a higher GI.

##### Glycaemic Load (GL):

- GL considers both the **quality and quantity of carbohydrates in a specific food**.
- It is the product of the GI and the amount of carbohydrate in a serving.

#### Types of Diabetes:

- **Diabetes is a chronic disease** caused by either the pancreas not producing enough insulin or the body not effectively using the insulin it produces.
- **Type 1 Diabetes:** This autoimmune condition involves the immune system attacking insulin-producing beta cells in the pancreas, resulting in little to no insulin production. It is often diagnosed in children and young adults.
- **Type 2 Diabetes:** This type is primarily caused by the body's ineffective use of the insulin it produces, often due to excess body weight and physical inactivity.

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